

## KINESIOLOGISTS, EXERCISE AND MENTAL HEALTH

As authorities on exercise and human movement, university educated Registered Kinesiologists are committed to enhancing the quality of life of Ontarians through: the prevention and management of injury, disability and chronic disease; workplace health and safety; and the overall improvement of health and performance.

There is broad consensus within the medical and public health communities that physical activity yields wide-ranging health benefits, including significant mental health benefits. No other single intervention or treatment is associated with such a diverse array of benefits. The lack of physical activity counseling in a clinical setting represents a lost opportunity to improve the mental and physical health and well-being of patients, and with minimal cost. Yet as few as 34% of adults report being counseled about physical activity at their last physician visit.

## RECOMMENDATIONS

- **Exercise prescription delivered by Registered Kinesiologists should be a first line of care for the prevention and treatment of mental health conditions in Ontario.**
- **Registered Kinesiologists should be a part of interdisciplinary health care teams in Ontario, particularly those treating mental health.**

## WHY A KINESIOLOGIST FOR IMPROVED MENTAL HEALTH?

Exercise is known to stimulate the body to produce endorphins and enkephalins, hormones which promote good feelings and make problems feel manageable. Exercise increases the volume of certain brain regions, in part through better blood supply and in part through factors which support neuron signaling, growth and connections; specifically, studies show that exercise promotes the creation of new neurons in the hippocampus, an area of the brain involved in memory, emotional regulation and learning.<sup>1</sup>

Exercise can decrease depression as effectively as pharmacological or behavioural therapy.<sup>2</sup>

Exercise is also effective in the treatment of anxiety. Normal and elevated levels anxiety can be significantly reduced following exercise. Anxiety is reduced by a statistically significant degree within 5 to 15 minutes of the end of exercise and remains decreased for 2 to 4 hours afterward.<sup>3</sup>

Physical activity can reduce the likelihood of Alzheimer's by almost 40% compared to those who are inactive. Approximately 1 in 7 cases of Alzheimer's disease could be prevented if everyone who is currently inactive were to become physically active at a level consistent with current activity recommendations of 30 minutes per day. This reduction could lead to cost savings of \$88 million to \$970 million per year in health care for community-dwelling older adults with Alzheimer's disease.<sup>4</sup>

As well, mental illness is implicated in the majority of disabilities, and according to the World Health Organization, depression drives up the likelihood of comorbidities and premature death. Those with major depression are roughly 40% to 60% more likely to die prematurely than the general population, owing to physical health problems that are left unattended. Depression predisposes individuals to conditions such

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<sup>1</sup> Gingell, Sarah. *Why Exercise Is So Essential for Mental Health*. Psychology Today. March 22, 2018.

<sup>2</sup> Exercise treatment for depression: Efficacy and dose response. Dunn, A et al. American Journal of Preventive Medicine. 2005.

<sup>3</sup> Physical activity in the prevention and treatment of anxiety and depression. Martensen, Egil. Nordic Journal of Psychiatry. 2009.

<sup>4</sup> The Role of Physical Activity in the Prevention and Management of Alzheimer's Disease – Implications for Ontario. Ontario Brain Institute. 2013.

as myocardial infarction (heart attack) and diabetes; conversely, these conditions also increase the likelihood of depression.<sup>5</sup> In fact, the WHO estimates that depression is present in...

- Up to 29% of people with hypertension
- Up to 30% of people with epilepsy
- 27% of people with diabetes
- 44% of people with HIV/AIDS
- Up to 22% of people with myocardial infarctions
- Up to 31% of people who have suffered strokes
- 33% of people with cancer
- 46% of people with tuberculosis

This compares to a rate of 10% incidence of depression in the general population.<sup>6</sup>

*Kinesiologists are best positioned to develop and deliver clinical exercise therapies that can serve as treatment for both the mental health and comorbid chronic disease.*

Kinesiologists can deliver these services effectively as parts of interdisciplinary care teams, in which the regulatory standing of Kinesiologists ensures they can not only deliver guided exercise therapy, but work with other allied providers to gain an understanding of the patient's mental health needs and other comorbid conditions, while communicating information back to the primary care physician in a fully confidential manner.

It should be possible for an Ontarian struggling with mental illness visit their family doctor, get a prescription to go down the hall and see the social worker, then the Kinesiologist for an exercise program and a Dietitian for a nutrition program. If co-locating Kinesiologists with other service providers is not possible, then patients should be able to get a referral and quickly connect with a local Kinesiologist to receive service.

## HOW MUCH EXERCISE IS ENOUGH?

For depression, a 10-week exercise program can be effective in mitigating depression, while for anxiety, a 12-week program is recommended. The most common parameters for helping mitigate depression involved exercise lasting at least 30 minutes, three times a week, at an intensity of about 60% to 80% of maximum heart rate.

An Australian meta-analysis concluded that working with patients to establish routines and to develop individual physical activity plans help in ensure that patients will continue to exercise – particularly important since, without support and an individually-tailored program, adherence to exercise programs may otherwise be likely to fall off after six months. The minimum exercise dosage for mental health benefits should be to exercise at moderate to vigorous intensity for at least 30 minutes three times a week for at least eight weeks to promote behaviour change.<sup>7</sup>

## ABOUT THE OKA

The Ontario Kinesiology Association is a non-profit organization representing approximately 1,400 members across Ontario. On April 1, 2013, Kinesiologists became a fully regulated health profession in Ontario under the Regulated Health Professions Act (1991). Ontario is a world leader in kinesiology. The first university degrees in kinesiology worldwide were granted at the University of Waterloo in 1970. Fifteen Ontario universities offer undergraduate kinesiology programs, granting upwards of 1,000 kinesiology degrees annually. Some of the best kinesiology research undertaken anywhere in the world is done at Ontario's universities.

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<sup>5</sup> World Health Organization. Mental Health Action Plan 2013-2020. 2013.

<sup>6</sup> World Health Organization Department of Mental Health and Substance Dependence, Noncommunicable Diseases and Mental Health. Investing in Mental Health. 2003.

<sup>7</sup> Morgan, Amy J. et al. *Exercise and Mental Health: An Exercise and Sports Science Australia Commissioned Review*. August 2013. JEP. Vol. 16 No. 4.